

Remarks

The Office Action dated May 2, 2006 has been carefully reviewed and the following remarks are made in consequence thereof.

Claims 1-27 are pending in this application. Claims 1-27 stand rejected.

The rejection of Claims 1-27 under 35 U.S.C. § 103(a) as being unpatentable over Holtrop (4,476,183) in view of Juriga (5,536,556), further in view of Weber (4,940,629), and further in view of Haussling (4,828,910) is respectfully traversed.

Independent Claim 1 of the present application recites in part "[a] multi-layered fiber reinforced thermoplastic sound absorbing panel comprising: . . . a barrier layer covering said tie layer, said barrier layer comprising a thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material, said tie layer bonding said barrier layer to said core layer"

Independent Claim 10 of the present application recites in part "[a] composite sheet comprising: . . . a barrier layer covering said second surface of said permeable core"

Independent Claim 20 recites in part "[a] method of manufacturing a porous fiber-reinforced thermoplastic sheet, said method comprising: . . . bonding a barrier layer to the second surface of the porous fiber-reinforced thermoplastic sheet"

The Office Action, at page 3, admits that "Holtrop fails to disclose a thermoplastic core layer comprising a thermoplastic material and from about 20 weight percent to about 80 weight percent fibers, a density from about 0.2 gm/cc to about 1.8 gm/cc; a tie layer comprising a thermoplastic material; and a barrier layer comprising thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material".

Also, the Office Action, at page 3 admits that "Weber fails to disclose a tie layer comprising a thermoplastic material; and a barrier layer comprising thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material".

Further, the Office Action, at page 4, admits that "Juriga fails to disclose a barrier layer comprising thermoplastic material having a melting temperature higher than the melting temperature of said core layer thermoplastic material".

The Office Action, at page 4 suggests that "Haussling discloses a barrier layer (Figure 1, #2) comprising thermoplastic material having a melting temperature higher than the melting temperature of said core layer (3) thermoplastic material (Col.2, Lines 56-68; Col. 4, Lines 27-33)". Applicants respectfully disagree with this suggestion because Haussling describes at Col. 2, lines 23-27, that reference number 2 refers to a fibrous, porous reinforcing mat. Also, Haussling describes at Col. 4 lines 11-14, that "[i]t is also important that mats 2 and 4 be porous to a sufficient degree that they do not act as sound reflectors in the same sense as a sheet of kraft paper, a polymer film or a layer of solid fiberglass reinforced resin". Applicants respectfully submit that one skilled in the art would not consider Haussling's fibrous, porous reinforcing mat 2 a barrier layer. Paragraph 0012 of the present application describes that "[t]he decorative sound absorbing panel is a multi-layer laminate containing an air permeable decorative layer, an air permeable thermoplastic adhesive layer, an air permeable porous fiber reinforced thermoplastic composite layer, a tie layer, an air impermeable barrier layer, and an air permeable fabric layer" (emphasis added). Also, paragraph 0021 describes that "[b]arrier layer 22 can be formed from any suitable non-permeable thermoplastic material having a melting temperature that is significantly higher than the thermoplastic material of core layer 12" (emphasis added).

Accordingly, Applicants submit that Haussling does not teach a multi-layered fiber reinforced thermoplastic sound absorbing panel that includes a barrier layer. Rather, Haussling teaches a fibrous, porous reinforcing mat layer.

At least for the reasons explained above, Holtrop, Weber, Juriga, and Haussling, alone or in combination, do not describe nor suggest a multi-layered fiber reinforced thermoplastic sound absorbing panel as recited in Claim 1, a composite sheet as recited in Claim 10, or a method of manufacturing a porous fiber-reinforced thermoplastic sheet as recited in Claim 20. Particularly, Holtrop, Weber, Juriga, and Haussling, alone or in combination, do not describe nor suggest a multi-layered fiber reinforced thermoplastic sound absorbing panel that includes a barrier layer, a composite sheet that includes a barrier layer, or a method of manufacturing a porous fiber-reinforced thermoplastic sheet that includes bonding a barrier layer to the second surface of the porous fiber-reinforced thermoplastic sheet. As explained above, Haussling teaches a fibrous, porous reinforcing mat layer rather than a barrier layer. Also, the Office Action has admitted that Holtrop, Weber, and Juriga do not disclose a barrier layer. Accordingly, Applicants submit that independent Claim 1, 10, and 20 are patentable over Holtrop, Weber, Juriga, and Haussling, alone or in combination.

Claims 2-9 depend from independent Claim 1, Claims 11-19 depend from independent Claim 10, and Claims 21-27 depend from independent Claim 20. When the recitations of Claims 2-9, Claims 11-19, and Claims 21-27 are considered in combination with Claims 1, 10, and 20 respectively, Applicants respectfully submit that dependent Claims 2-9, 11-19, and 21-27 likewise are patentable over Holtrop, Weber, Juriga, and Haussling, alone or in combination.

For the reasons set forth above, Applicants respectfully request that the Section 103(a) rejection of Claims 1-27 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in cursive script, reading "Michael Tersillo". The signature is written in dark ink and is positioned above a horizontal line.

Michael Tersillo
Registration No. 42,180
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070